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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/517,221 | 08/08/2005 | Kazuya Odagiri | 09812.0520-00000 | 2429 |

22852 7590 02/23/2007
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| EXAMINER |
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ALAM, FAYYAZ

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| ART UNIT | PAPER NUMBER |
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2618

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE | DELIVERY MODE |
|--|------------|---------------|
| 3 MONTHS | 02/23/2007 | PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

| | | | |
|------------------------------|-------------------------------|--------------------------------|--|
| Office Action Summary | Application No. 10/517,221 | Applicant(s) ODAGIRI ET AL. | |
| | Examiner Fayyaz Alam | Art Unit 2618 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 January 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 8 - 10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 8 - 10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This action is in response to applicant's amendment/arguments filed on 1/19/2007. **This action is made FINAL** based on amendments made to the claims filed 9/27/2006.

Response to Arguments

Applicant's arguments filed 1/19/2007 have been fully considered but they are moot in view of new grounds of rejection.

The examiner respectfully disagrees. Please refer to the rejection of claim 8.

In response to applicant's argument on page 4 that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

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Claims 8 - 10 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. On line 19, claim 8 discloses, "other transmission signals". Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 8 - 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Yoshizawa (U.S. Patent # 7,039,445)** in view of **Thompson et al. (U.S. Patent # 5,812,093)**.

Consider **claim 8**, Yoshizawa discloses a communication apparatus for radio communications (read as wireless communication) with another apparatus near the self-apparatus (read as neighboring communication apparatus, in addition, a Bluetooth environment is disclosed in col. 3, lines 15 - 52), comprising (see col. 1, line 65 - col. 2, line 15):

transmission data processing section (22) converts transmission signals into RF signals (read as transmission processing means for processing transmission signals), the transmission signals include a station finding message (read as search signal) in order to search for nearby communication apparatuses (read as searching for neighboring communication apparatuses) (see abstract; col. 2, lines 8 - 15; col. 3, line 53 - col. 4, line 5; col. 5, lines 40 - 44; figs. 1 & 3);

an adaptive array antenna (25) receiving an output from the transmission data processing section (22) (see fig. 1), comprising at least three antenna elements (25a,

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25b, & 25c) (read as first and second antennas), where it is well-known in the art to selectively turn on and off the said antenna elements in order to control the antenna radiation characteristics (namely directivity), thereby giving the effect of a selectively choosing an antenna, including first and second antennas (see figs. 1 and 2; col. 4, line 66 - col. 5, line 22); and

radio communication apparatus control section (28) controls the transmission amplifier (23) ((28) and (23) together read as output power control means, since they both control and set the transmission power value; see col. 4, lines 28 - 30) coupled to transmission data processing section (22) (read as transmission processing means) and to the adaptive array antenna (25) (read as first and second antennas), said control section (28) and transmission amplifier (23) (read as output power control means) receive the output from the transmission data processing section (22) (read as transmission processing means) and sends the output of the transmission data processing section (22) (read as transmission processing means) to the adaptive array antenna (25) (read as first or second antenna; see fig. 1; col. 3, line 65 - col. 4, line 5), wherein the adaptive array antenna (25) (read as second antenna) transmits station finding message (read as search signal) and also transmits RF signals (read as other transmission signals) through adaptive array antenna (25) (read as first antenna) (see col. 3, line 65 - col. 4, line 5; col. 4, line 66 - col. 5, line 22; col. 5, lines 40 - 44; col. 8, lines 34 - 42).

The invention as disclosed by Yoshizawa teaches an adaptive array of antenna (25) (read as first and second and antenna), where the directivity (read as sensitivity,

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since they are related to each other) of the said antenna can be selectively controlled in order increase or decrease the antenna radiation characteristics (i.e. directivity, sensitivity, power, gain, etc.) (see fig. 1 and 2, col. 4, line 66 - col. 5, line 22).

However, Yoshizawa fails to teach that second antenna includes a signal line terminated in an impedance at ground and the sensitivity of the second antenna being lower than the sensitivity of the first antenna.

In the related field of endeavor, Thompson et al., clearly disclose a helical radiating element (302) (read as second antenna) is formed of a signal line terminated in an impedance on the ground (see figure 8 and column 6, lines 48 - 63) and sensitivity thereof is made lower.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention to incorporate the teachings of Thompson et al. with that of Yoshizawa since the practice of grounding an antenna in order to increase impedance and as a result reducing the sensitivity is well-known in the art for the purpose of reduction in transmitting and receiving power (see col. 6, lines 57 - 63).

Consider **claim 9**, in view of claim 8, Yoshizawa discloses transmission data processing section (22) (read as transmission processing means) and a transmission amplifier (23), where transmission processing data section and transmission amplifier be in separate modules or combined in a single IC with other radio circuitry and thus would be a design choice (see fig. 1). In addition, when the adaptive array antenna (25) (read as second antenna) transmits a station finding message (read as search signal) to a limited number of subsidiary stations by controlling the transmission amplifier (23)

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(read as gain of transmission amplifier is reduced) (see col. 8, lines 39 - 43; col. 8, lines 52 - 55; figs. 1, 3, 12, 13).

Consider **claim 10**, in view of claim 9, Yoshizawa discloses reception data processing section (27) (read as reception processing means), connected to the adaptive array antenna (25) (read as first and second antennas), for processing a reception signal, and the reception data processing section (27) (read as reception processing means) selectively receiving signals from the adaptive array antenna (25) (read as first and second antennas) (see figs. 1 and 2; col. 4, line 6 - 17; col. 4, line 66 - col. 5, line 22).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any response to this Office Action should be **faxed to (571) 273-8300 or mailed to:**

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P.O. Box 1450
Alexandria, VA 22313-1450

Hand-delivered responses should be brought to

Customer Service Window
Randolph Building
401 Dulany Street
Alexandria, VA 22314

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Fayyaz Alam whose telephone number is (571) 270-1102. The Examiner can normally be reached on Monday-Friday from 9:30am to 7:00pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Edan Orgad can be reached on (571) 272-7884. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you

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have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or 703-305-3028.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist/customer service whose telephone number is (571) 272-2600.

Fayyaz Alam

February 15, 2007

Lana L
2-19-07
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